

## ABSTRACT

A pinion shaft (7) formed using a non-refined steel as a material comprises a shaft section (71, 72) and a pinion teeth forming section (70) connecting with the shaft section (71,72). The pinion teeth forming section (70) comprises pinion teeth (7a) and a tooth bottom (7b). The pinion teeth forming section (70) and the shaft section (71,72) are provided with a hardened layer (80) that has been subjected to induction hardening and tempering. The steel contains 0.45 to 0.55 % by mass of C, 0.10 to 0.50 % by mass of Si, 0.15 to 0.25 % by mass of Mo, and 0.0005 to 0.005 % by mass of B. The surface hardnesses of the pinion teeth forming section (70) and the shaft section (71,72) are 650 to 760 HV in terms of Vickers hardness.